

Roundtable on Science and Policy Perspectives: National Security Implications of Climate Change

House Committee on Science, Space and Technology

Introductory Remarks by Marcus D. King, Ph.D.

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Ranking member Johnson and members of the Committee: thank you for the opportunity to speak here today. My name is Marcus King. I have been an associate professor at George Washington University's Elliott School of International Affairs since 2011. I also hold the positions of Senior Fellow and member of the Board of Advisors for the Center for Climate and Security. Over the past 15 years, my research both in academia and other research organizations focused on the national security implications of environmental degradation and energy use. In the late 1990s, I served in the Department of Defense where I was a member of the U.S. Delegation for negotiation of the United Nations Framework Convention on Climate Change (UNFCCC).

My current research seeks to better understand linkages between environmental scarcity, specifically in the form of drought, and security threats generated by violent non-state actors. This research includes analysis of natural resource scarcity both as a driver of social and political instability and as an intervening factor in various stages of conflict.

First, I would like to point out that there is an increasing body of academic and policy research identifying clear pathways of influence between climate change impacts and political instability. This instability can lead to outbreaks of large scale violence or create havens for terrorist and criminal activity in countries important to U.S. national security.

In these countries, the results of climate change will manifest across various social, economic, and security sectors and experts have estimated harms are expected to exceed any benefits. Climate change is connected to stressors – such as food insecurity, water scarcity and demographic shifts. These stressors are prevalent in unstable, conflict-prone and strategically significant regions.

Water stress caused by droughts is a growing global concern. Climate change has been linked to increased frequency and severity of drought conditions, particularly in the Middle East and Africa. Water stress has tangible and immediate effects on vulnerable populations.

The events that unfolded in Syria in the build-up to the civil war are an instructive example. In 2011, Syria was struck by the worst drought in instrumental record. This drought caused serious losses in wheat crop yields while price spikes were occurring in global markets based on environmental conditions in Russia. The drought's negative impact on Syrian harvests, compounded by historical poor water governance sparked a wave of migration. Many of these migrants were farmers who were forced to move to cities in Northern Syria seeking better conditions. Some were relegated to peripheral shanty towns on the outskirts of settlements where municipal services were scant or

nonexistent. The violent protests and harsh repression that became the rallying cry for the uprising against Bashar al-Assad occurred in one such town called Dara'a. Thus climate change was a step on a path of influence leading to the outbreak of the War. Regional climate forecasts project more severe impacts in the coming decades.

Egypt is an emerging example where climate conditions are beginning to threaten food security. The expansion of deserts, flooding and tidal flows that deposit salt in the soil pose great threats to domestic agriculture in the confined fertile lands of the Nile riverbanks and Delta. As the world's leading wheat importer, Egypt's vulnerability to price shocks also led to food riots that preceded Arab Spring uprisings. It is questionable whether the current Government of Egypt has the data and methods to understand climate change impacts on food security or the institutional capacity to forestall them. Renewed instability in Egypt carries implications for regional and international security.

Closer to the United States, low levels of rural development, environmental degradation and reliance on climate-sensitive crops have deepened food insecurity in Guatemala. Climate forecasts project an increase in rainfall intensity and a greater number of dry days with higher temperatures. These factors multiply existing risk of droughts and floods in a country that has historically been highly exposed but unable to cope with such recurring disasters. Weak government responses have eroded state legitimacy creating ungoverned spaces. Again, rural to urban migration has exposed Guatemalan youth to recruitment by criminal gangs known as "maras" and transnational narcotics trafficking cartels. In 2014, as many as 17,000 unaccompanied minors from Guatemala

were detained at the U.S.-Mexican border fleeing poverty, gang recruitment and violence.

Given the unprecedented changes to the climate underway, the historical record does not provide sufficient to develop reliable future scenarios of instability. Future simulations, foresight exercises, and other research that enables a more nuanced understanding of the interconnections between demographic pressures, natural resources and state stability, will be increasingly important to security organizations. Support for collaboration between U.S. scientific research and a national security organization is essential for reliable assessments.

Last year, the U.S. National Intelligence Council produced an assessment at Presidential request finding that climate change will likely pose significant national security challenges for the United States over the next two decades.¹ Evidence-based research and analysis relies on a foundation climate science undertaken or funded by U.S. civilian agencies.

Current intelligence estimates are based on scenarios that will unfold in the next two or three decades. Regrettably, the results of even the most aggressive mitigation policies will not substantially reverse the acceleration of climate change within this timeframe. Therefore, the U.S. government should assume a posture of consequence management by improving capacity to predict likely flashpoints of violent conflict and make interventions that avoid the worst outcomes for national security. Thank you once again for the opportunity to offer this statement and I look forward to your questions.

¹ U.S. National Intelligence Council. *Implications for U.S. National Security of Anticipated Climate Change*. Washington D.C.: Office of the Director of National Intelligence, 21 September 2016.